RAW SEQUENCE LISTING   DATE: 03/13/2002
PATENT APPLICATION: US/10/082,018   TIME: 10:16:31

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 1 <110> APPLICANT: CHEN, Li How
 2       MEADE, Henry
 3 <120> TITLE OF INVENTION: NOVEL MODIFIED MSP-1 NUCLEIC ACID SEQUENCES AND
 4       METHODS FOR INCREASING mRNA LEVELS AND PROTEIN
 5       EXPRESSIONS IN CELL SYSTEMS
 6 <130> FILE REFERENCE: 107.637.121A
 7 <140> CURRENT APPLICATION NUMBER: 10/082,018
 8 <141> CURRENT FILING DATE: 2002-02-20
10 <150> PRIOR APPLICATION NUMBER: US/09/175,684
11 <151> PRIOR FILING DATE: 1998-10-20
13 <160> NUMBER OF SEQ ID NOS: 8
14 <170> SOFTWARE: PatentIn Ver. 2.0
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 1065
18 <212> TYPE: DNA
19 <213> ORGANISM: preferably, a bacterium, virus, or parasite
20 <400> SEQUENCE: 1
21       gccgtcactc cctccgtcat cgataacatc ctgtccaaga tcgagaacga gtacgaggtg 60
22       ctgtacctga agccgctggc aggggtctac cggagcctga agaagcagct ggagaacaac 120
23       gtgatgacct tcaacgtgaa cgtgaaggat atcctgaaca gccggttcaa caagcgggag 180
24       aacttcaaga acgtgctgga gagcgatctg atcccctaca aggatctgac cagcagcaac 240
25       tacgtggtca aggatcccta caagttcctg aacaaggaga agagagataa gttcctgagc 300
26       agttacaact acatcaagga tagcattgat accgatatca acttcgccaa cgatgtcctg 360
27       ggatactaca agatcctgtc cgagaagtac aagagcgatc tggattcaat caagaagtac 420
28       atcaacgata agcagggaga gaacgagaag tacctgccct tcctgaacaa catcgagacc 480
29       ctgtacaaga ccgtcaacga taagattgat ctgttcgtga tccacctgga ggccaaggtc 540
30       ctgaactaca catatgagaa gagcaacgtg gaggtcaaga tcaaggagct gaattacctg 600
31       aagaccatcc aggataagct ggccgatttc aagaagaaca acaacttcgt cgggatcgcc 660
32       gatctgagca ccgattacaa ccacaacaac ctgctgacca agttcctgag caccggtatg 720
33       gtcttcgaaa acctggccaa gaccgtcctg agcaacctgc tggatgggaa cctgcagggc 780
34       atgctgaaca tcagccagca tcagtcgtgt aagaagcagt gtccccagaa cagcgggtgt 840
35       ttcagacacc tggatgagag agaggagtgt aagtgtctgc tgaactacaa gcaggaaggt 900
36       gataagtgtg tggaaaaccc caatcctact tgtaacgaga caaatggtgg atgtgatgcc 960
37       gatgccaagt gtaccgagga ggattcaggg agcaacggga agaagatcac ctgtgagtgt 1020
38       accaagctg attcttatcc actgttcgat ggtatcttct gtagt 1065
40 <210> SEQ ID NO: 2
41 <211> LENGTH: 1088
42 <212> TYPE: DNA
43 <213> ORGANISM: preferably, a bacterium, virus, or parasite
44 <400> SEQUENCE: 2
45       gcagtaactc cttccgtaat tgataacata ctttctaaaa ttgaaaatga atatgaggtt 60
46       ttatatttaa aacctttagc aggtgtttat agaagtttaa aaaaacaatt agaaaataac 120
47       gttatgacat ttaatgttaa tgttaaggat attttaaatt cacgatttaa taaacgtgaa 180
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48      aatttcaaaa atgtttttaga atcagattta attccatata agatttaac atcaagtaat 240
49      tatgttgtca aagatccata taaatttctt aataaagaaa aaagagataa attcttaagc 300
50      agttataatt atattaagga ttcaatagat acggatataa attttgcaaa tgatgttctt 360
51      ggatattata aaatattatc cgaaaaatat aaatcagatt tagattcaat taaaaaatat 420
52      atcaacgaca aacaaggtga aaatgagaaa taccttccct ttttaaacaa tattgagacc 480
53      ttatataaca cagttaatga taaaattgat ttatttgtaa ttcatttaga agcaaaagtt 540
54      ctaaattata catgtagaa atcaaacgta gaagttaaaa taaaagaact taattactta 600
55      aaaacaattc aagacaaatt ggcagatttt aaaaaaaata acaatttcgt tggaattgct 660
56      gatttatcaa cagattataa ccataataac ttattgacaa agttccttag tacaggtatg 720
57      gtttttgaaa atcttgctaa aaccgtttta tctaatttac ttgatggaaa cttgcaaggt 780
58      atgttaaaca tttcacaaca ccaatgcgta aaaaaacaat gtccacaaaa ttctggatgt 840
59      ttcagacatt tagatgaaag agaagaatgt aaatgtttat taaattacaa acaagaaggt 900
60      gataaatgtg ttgaaaatcc aaatcctact tgtaacgaaa ataatggtgg atgtgatgca 960
61      gatgccaaat gtaccgaaga agattcaggt agcaacggaa agaaaatcac atgtgaatgt 1020
62      actaaacctg attcttatcc acttttcgat ggtattttct gcagtcacca ccaccaccac 1080
63      cactaact                                                       1088
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65 <210> SEQ ID NO: 3
66 <211> LENGTH: 88
67 <212> TYPE: DNA
68 <213> ORGANISM: preferably, a bacterium, virus, or parasite
69 <400> SEQUENCE: 3
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70      tcgacgagag ccatgaaggt cctcatcctt gcctgtctgg tggctctgac cattgcaaga 60
71      gagcaggaag aactcaatgt agtcggta                                   88
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73 <210> SEQ ID NO: 4
74 <211> LENGTH: 88
75 <212> TYPE: DNA
76 <213> ORGANISM: preferably, a bacterium, virus, or parasite
77 <400> SEQUENCE: 4
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78      gatctaccga ctacattgag ttcttcctgc tctcttgcaa tggccagagc caccagacag 60
79      gcaaggatga ggaccttcat ggctctcg                                   88
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81 <210> SEQ ID NO: 5
82 <211> LENGTH: 60
83 <212> TYPE: DNA
84 <213> ORGANISM: preferably, a bacterium, virus, or parasite
86 <400> SEQUENCE: 5
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86      taactcgagc gaaccatgaa ggtcctcatc cttgcctgtc tggtggctct ggccattgca 60
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88 <210> SEQ ID NO: 6
89 <211> LENGTH: 48
90 <212> TYPE: DNA
91 <213> ORGANISM: preferably, a bacterium, virus, or parasite
92 <400> SEQUENCE: 6
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93      aattctcgag ttagtggtgg tggtggtggt gactgcagaa ataccatc             48
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95 <210> SEQ ID NO: 7
96 <211> LENGTH: 31
97 <212> TYPE: DNA
98 <213> ORGANISM: preferably, a bacterium, virus, or parasite
99 <400> SEQUENCE: 7
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100      aatagatctg cagtaactcc ttccgtaatt g                              31
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102 <210> SEQ ID NO: 8

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103 <211> LENGTH: 1142
104 <212> TYPE: DNA
105 <213> ORGANISM: preferably, a bacterium, virus, or parasite
106 <400> SEQUENCE: 8
107     atgaaggtcc tcataattgc ctgtctggtg gctctggcca ttgcagccgt cactccctcc 60
108     gtcatcgata acatcctgtc caagatcgag aacgagtacg aggtgctgta cctgaagccc 120
109     ctggcaggag tctacaggag cctgaagaag cagctggaga acaacgtgat gaccttcaac 180
110     gtgaacgtga aggatatcct gaacagcagg ttcaacaaga gggagaactt caagaacgtg 240
111     ctggagagcg atctcgatcc ctacaaggat ctgaccagca gcaactacgt ggtcaaagat 300
112     ccctacaagt tcctgaacaa ggagaagaga gataagttcc tgagcagtta caattacatc 360
113     aaggatagca ttgacaccga tatcaacttc gccaacgatg tcctgggata ctacaagatc 420
114     ctgtccgaga agtacaagag cgatctggat agcatcaaga agtacatcaa cgataagcag 480
115     ggagagaacg agaagtacct gcccttcctg aacaacatcg agaccctgta caagaccgtc 540
116     aacgataaga ttgatctgtt cgtgatccac ctggaggcca aggtcctgca gtacacatat 600
117     gagaagagca acgtggaggt caagatcaag gagctgaatt acctgaagac catccaggat 660
118     aagctggccg atttcaagaa gaacaacaac ttcgtcggaa tcgccgatct gagcaccgat 720
119     tacaaccaca acaacctgct gaccaagttc ctgagcaccg gaatggtctt cgaaaacctg 780
120     gccaagaccg tcctgagcaa cctgctggat ggaaacctgc agggaatgct gcagatcagc 840
121     cagcaccagt gtgtgaagaa gcagtgtccc cagaacagcg gatgcttcag acacctggat 900
122     gagagggagg agtgcaagtg cctgctgaac tacaagcagg aaggagataa gtgtgtggaa 960
123     aacccaatc ctacttgtaa cgagaacaat ggaggatgcg atgccgatgc caagtgtacc 1020
124     gaggaggatt caggaagcaa cggaaagaag atcacctgcg agtgtaccaa gcctgattct 1080
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126     cc 1142
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